

# **Motorcycles**

## **2003**



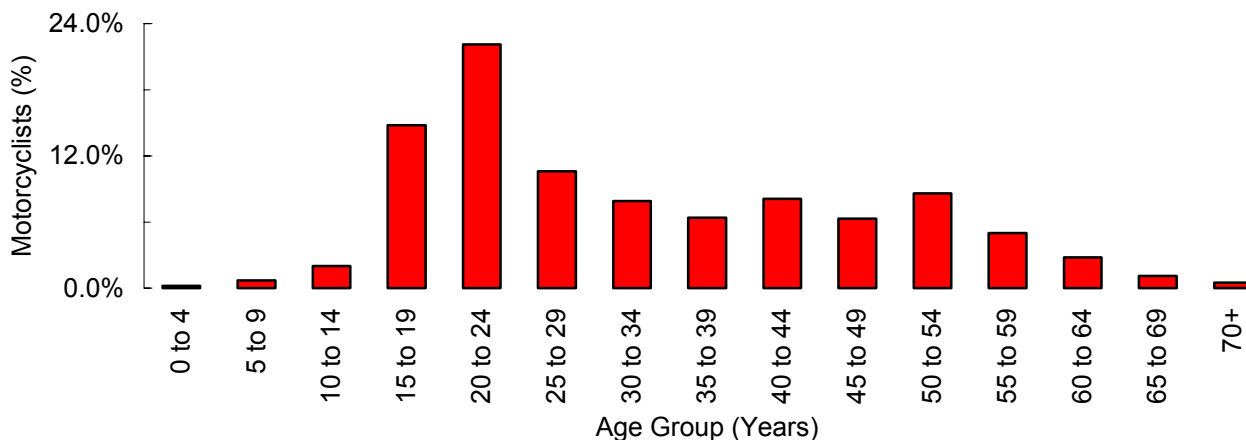
## MOTORCYCLES



### Did you know that in 2003. . .

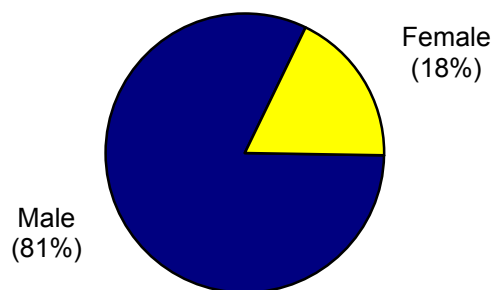
- There were 766 total motorcycle crashes in Utah, resulting in 730 injured persons and 22 fatalities.
- There was a 5.9% decrease from 2002 in the rate of total motorcycle crashes, and a 3.4% decrease from 2002 in the rate of motorcycle injury crashes.
- Nearly all of the motorcycle crashes resulted in an injury (86.2%) compared to 36.3% of all motor vehicle crashes.
- Fatalities were 12 times higher for motorcyclists than for other motor vehicle crash occupants.

### Age of Motorcyclists (Driver and Passenger) Involved in Crashes, Utah 2003



- Over one-half (50.4%) of the motorcyclists involved in crashes were under the age of 30 years.
- Motorcyclists aged 20 to 24 years were involved in the highest percentage of crashes (22.1%).

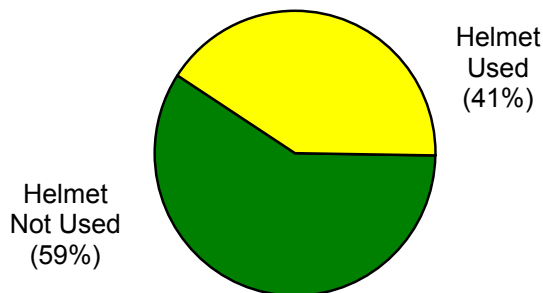
### Gender of Motorcyclists Involved in Crashes, Utah 2003



NOTE: Gender was missing for 1% of motorcyclists.

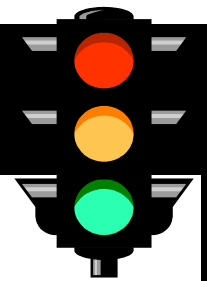
- Most motorcyclists involved in crashes were male (81%).
- The high percentage of male motorcyclists involved in crashes does not necessarily indicate that male motorcyclists are at greater risk for a crash, but may reflect the higher proportion of motorcycle users who are male.

### Helmet Use of Motorcyclists Killed in a Crash, Utah 2003

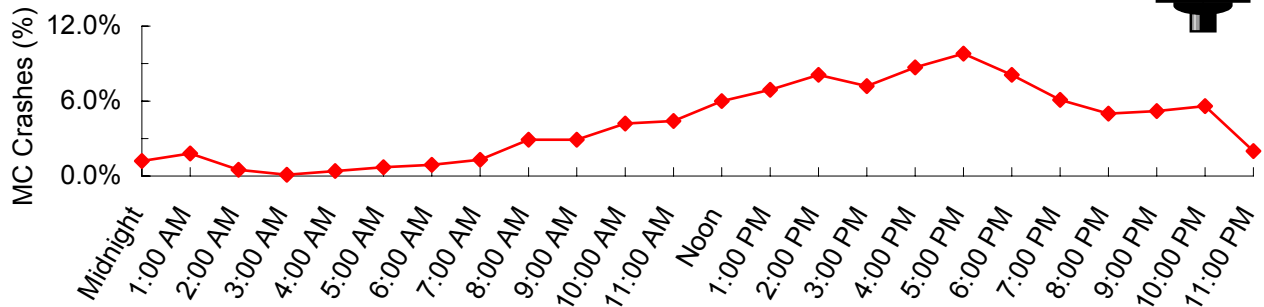


- The majority of the motorcyclists killed in a crash were not wearing a helmet (59%).
- Overall, only 35.4% of motorcycle drivers and passengers involved in crashes wore a helmet.
- Utah law states that anyone under the age of 18 years riding a motorcycle, either as the driver or as a passenger, must wear a helmet approved by the Department of Public Safety.

## MOTORCYCLES

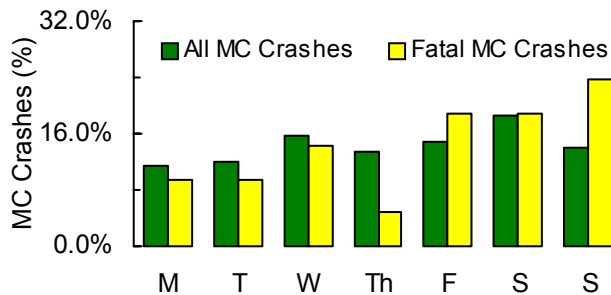


Time of Day Motorcycle Crashes Occurred, Utah 2003



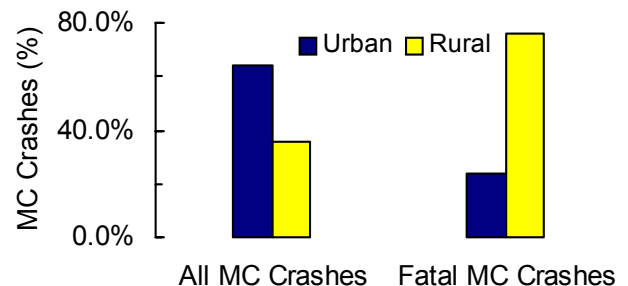
- The highest percentage of motorcycle crashes occurred between 2:00 pm and 6:00 pm.

Motorcycle Crashes by Day of Week, Utah 2003



- The highest percentage of all motorcycle crashes occurred on Saturday (18.7%).
- Fatal motorcycle crashes occurred most frequently on Sunday (23.8%).

Urban/Rural Location of Motorcycle Crashes, Utah 2003



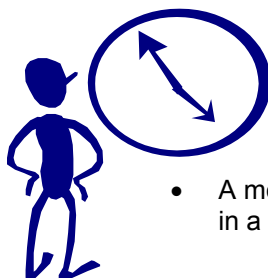
- The majority of all motorcycle crashes occurred in urban areas (64.2%).
- The largest percentage of fatal motorcycle crashes occurred in rural areas (76.2%).
- Motorcycle crashes in rural areas were 13 times more likely to result in a fatality than motorcycle crashes in urban areas.

Leading Motorcycle Crash Violations, Utah 2003

- Speeding (12.7%)
- Driving under the influence (9.6%)
- Following too close (7.6%)
- Reckless driving (7.1%)
- Improper lookout (5.6%)

Approximately one-quarter (25.3%) of the motorcycle drivers involved in crashes received a citation. However, no citations were given to motorcycle drivers involved in fatal crashes.

Motorcycle Crash Clock



- A motorcyclist was involved in a crash every 60 minutes.

Alcohol and Other Drug Involvement



- Of the 22 motorcycle drivers and motorcycle passengers killed in 2003, 1 motorcycle driver was impaired by alcohol or other drugs.

## Section 6: Motorcycles

### Section 6: Motorcycles 2003

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#### Crash Characteristics

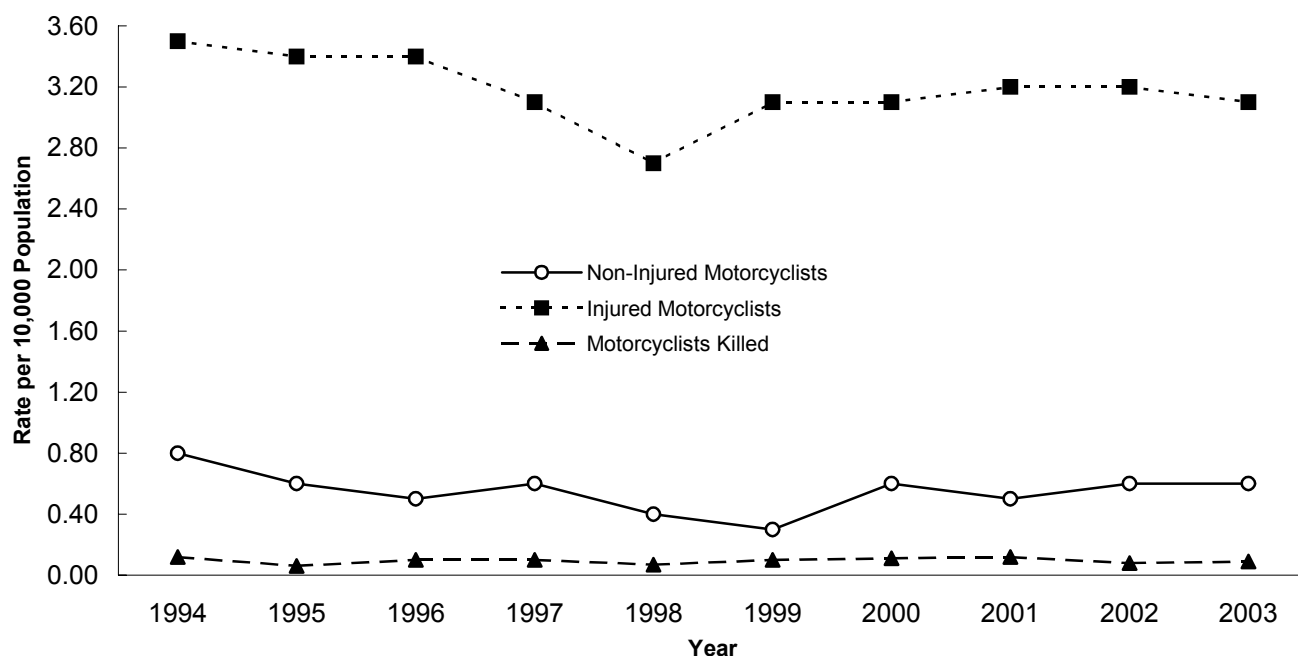
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## Trends

### Motorcyclists Involved in Crashes 1994-2003

Motorcyclists (Driver and Passenger)									
Year	Population	Non-Injured Persons		Injured Persons		Persons Killed		Total Persons	
		Non-Injured	Rate per	Injured	Rate per	Motorcyclists	Rate per	All	Rate per
		Motorcyclists	10,000	Motorcyclists	10,000	Killed	10,000	Motorcyclists	10,000
		#	Population	#	Population	#	Population	#	Population
1994	1,946,721	156	0.8	674	3.5	24	0.12	854	4.4
1995	1,995,228	119	0.6	680	3.4	11	0.06	810	4.1
1996	2,042,893	112	0.5	698	3.4	21	0.10	831	4.1
1997	2,099,409	120	0.6	652	3.1	22	0.10	794	3.8
1998	2,141,632	93	0.4	584	2.7	14	0.07	691	3.2
1999	2,193,014	76	0.3	671	3.1	23	0.10	770	3.5
2000	2,246,553	124	0.6	694	3.1	24	0.11	842	3.7
2001	2,295,971	124	0.5	733	3.2	28	0.12	885	3.9
2002	2,338,761	130	0.6	755	3.2	18	0.08	903	3.9
2003	2,385,358	134	0.6	730	3.1	22	0.09	886	3.7
Total	21,685,540	1,188	0.5	6,871	3.2	207	0.10	8,266	3.8

### Motorcyclists Involved in Crashes (Driver and Passenger) (Utah 1994-2003)



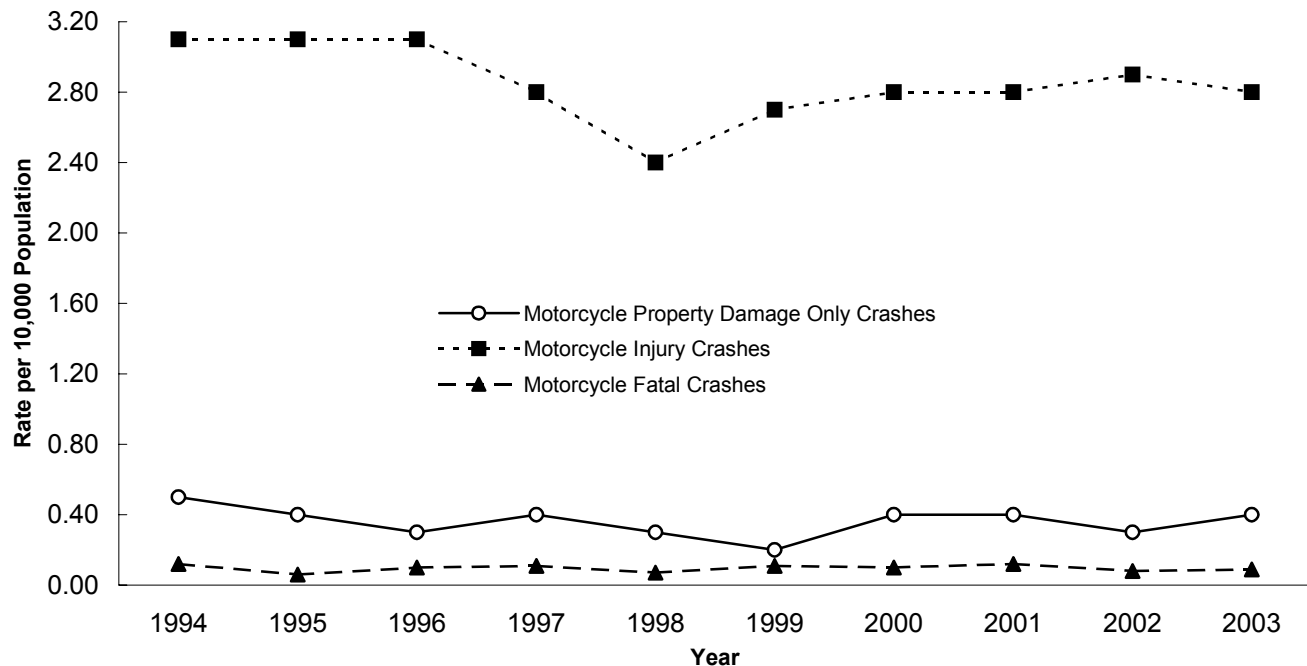
- The above table and graph show the trends in motorcyclists (driver and passenger) involved in crashes from 1994 to 2003.
- Overall, the rate of motorcyclists involved in crashes decreased from 1994 to 1998, with the lowest rate of motorcyclists involved in crashes occurring in 1998 (3.2).
- In 2003, there was a 5.1% decrease in the rate of total motorcyclists involved in crashes and a 3.1% decrease in the rate of motorcyclists injured in crashes from 2002.
- While motorcyclists killed in crashes vary from year to year, the small number of fatalities makes it difficult to compare yearly increases and decreases.

## Trends

### Motorcycle Crashes 1994-2003

Motorcycle Crashes									
Year	Population	Property Damage Only (PDO)		Injury		Fatal		Total	
		Motorcycle	Rate	Motorcycle	Rate	Motorcycle	Rate	All	Rate
		PDO	per	Injury	per	Fatal	per	Motorcycle	per
		Crashes	10,000	Crashes	10,000	Crashes	10,000	Crashes	10,000
		#	Population	#	Population	#	Population	#	Population
1994	1,946,721	96	0.5	597	3.1	24	0.12	717	3.7
1995	1,995,228	86	0.4	614	3.1	11	0.06	711	3.6
1996	2,042,893	66	0.3	626	3.1	21	0.10	713	3.5
1997	2,099,409	80	0.4	594	2.8	23	0.11	697	3.3
1998	2,141,632	66	0.3	509	2.4	14	0.07	589	2.8
1999	2,193,014	52	0.2	602	2.7	24	0.11	678	3.1
2000	2,246,553	88	0.4	624	2.8	22	0.10	734	3.3
2001	2,295,971	82	0.4	648	2.8	28	0.12	758	3.3
2002	2,338,761	81	0.3	689	2.9	18	0.08	788	3.4
2003	2,385,358	84	0.4	661	2.8	21	0.09	766	3.2
Total	21,685,540	781	0.4	6,164	2.8	206	0.09	7,151	3.3

### Motorcycle Crashes (Utah 1994-2003)



- The above table and graph show the trends in motorcycle crashes from 1994 to 2003.
- Overall, the rate of motorcycle crashes decreased from 1994 to 1998, with the lowest rate of motorcycle crashes occurring in 1998 (2.8).
- In 2003, there was a 5.9% decrease in the rate of total motorcycle crashes and a 3.4% decrease in the rate of motorcycle injury crashes from 2002.
- While fatal motorcycle crashes vary from year to year, the small number of fatal crashes makes it difficult to compare yearly increases and decreases.

## Counties

### Motorcyclists Involved in Crashes by County (Utah 2003)

Motorcyclists (Driver and Passenger)												
	Non-Injured Persons			Injured Persons			Persons Killed			Total Persons		
	Non-Injured	Rate	Rate	Injured	Rate	Rate	Motor-	Rate	Rate	All	Rate	Rate
	Motor-	per 100	per	Motor-	per 100	per	cyclists	per 100	per	Motor-	per 100	per
	cyclists	Million	10,000	cyclists	Million	10,000	Killed	Million	10,000	cyclists	Million	10,000
County	#	VT	Population	#	VT	Population	#	VT	Population	#	VT	Population
Beaver	1	0.4	1.6	4	1.7	6.4	0	0.0	0.0	5	2.1	8.0
Box Elder	4	0.5	0.9	8	0.9	1.8	0	0.0	0.0	12	1.4	2.7
Cache	7	0.8	0.7	28	3.4	2.9	0	0.0	0.0	35	4.2	3.6
Carbon	1	0.3	0.5	6	2.0	3.1	0	0.0	0.0	7	2.3	3.6
Daggett	0	0.0	0.0	1	3.7	10.9	0	0.0	0.0	1	3.7	10.9
Davis	9	0.4	0.4	45	2.0	1.8	1	0.0	0.0	55	2.5	2.1
Duchesne	1	0.5	0.7	8	4.1	5.4	1	0.5	0.7	10	5.1	6.8
Emery	1	0.3	1.0	5	1.4	4.8	2	0.6	1.9	8	2.3	7.6
Garfield	2	1.6	4.4	10	8.0	22.1	0	0.0	0.0	12	9.6	26.5
Grand	1	0.4	1.2	7	2.5	8.3	0	0.0	0.0	8	2.9	9.5
Iron	3	0.5	0.8	16	2.6	4.4	0	0.0	0.0	19	3.1	5.2
Juab	2	0.5	2.3	3	0.8	3.4	0	0.0	0.0	5	1.3	5.7
Kane	2	1.6	3.4	6	4.9	10.1	2	1.6	3.4	10	8.2	16.8
Millard	2	0.5	1.6	2	0.5	1.6	0	0.0	0.0	4	1.0	3.3
Morgan	3	2.6	4.0	7	6.2	9.3	1	0.9	1.3	11	9.7	14.6
Piute	0	0.0	0.0	1	3.3	7.4	0	0.0	0.0	1	3.3	7.4
Rich	0	0.0	0.0	9	20.6	43.3	0	0.0	0.0	9	20.6	43.3
Salt Lake	62	0.8	0.7	257	3.2	2.7	5	0.1	0.1	324	4.1	3.4
San Juan	1	0.4	0.7	12	4.3	8.4	0	0.0	0.0	13	4.6	9.1
Sanpete	0	0.0	0.0	2	0.9	0.9	1	0.4	0.4	3	1.3	1.3
Sevier	1	0.3	0.5	5	1.3	2.6	0	0.0	0.0	6	1.5	3.1
Summit	0	0.0	0.0	11	1.7	3.2	1	0.2	0.3	12	1.8	3.5
Tooele	1	0.1	0.2	15	1.9	3.1	0	0.0	0.0	16	2.0	3.3
Uintah	0	0.0	0.0	12	4.2	4.6	0	0.0	0.0	12	4.2	4.6
Utah	16	0.5	0.4	134	4.0	3.3	1	0.0	0.0	151	4.5	3.7
Wasatch	0	0.0	0.0	7	2.7	4.0	4	1.6	2.3	11	4.3	6.3
Washington	6	0.6	0.6	35	3.5	3.3	1	0.1	0.1	42	4.2	4.0
Wayne	0	0.0	0.0	5	12.9	20.1	0	0.0	0.0	5	12.9	20.1
Weber	8	0.5	0.4	69	4.6	3.4	2	0.1	0.1	79	5.3	3.8
Statewide	134	0.6	0.6	730	3.0	3.1	22	0.1	0.1	886	3.7	3.7

- Two different rates are given in the above table; one based on vehicle miles traveled in the county, and another based on the population of the county.
- Rate per 100 million vehicle miles traveled:
  - Rich (20.6), Wayne (12.9) and Garfield (8.0) had the highest rates of motorcyclists injured in crashes per 100 million vehicle miles traveled.
  - Kane (1.6), Wasatch (1.6) and Morgan (0.9) had the highest rates of motorcyclists killed in crashes per 100 million vehicle miles traveled.
- Rate per 10,000 population:
  - Rich (43.3), Garfield (22.1) and Wayne (20.1) had the highest rates of motorcyclists injured in crashes per 10,000 population.
  - Kane (3.4), Wasatch (2.3) and Emery (1.9) had the highest rates of motorcyclists killed in crashes per 10,000 population.



## Counties

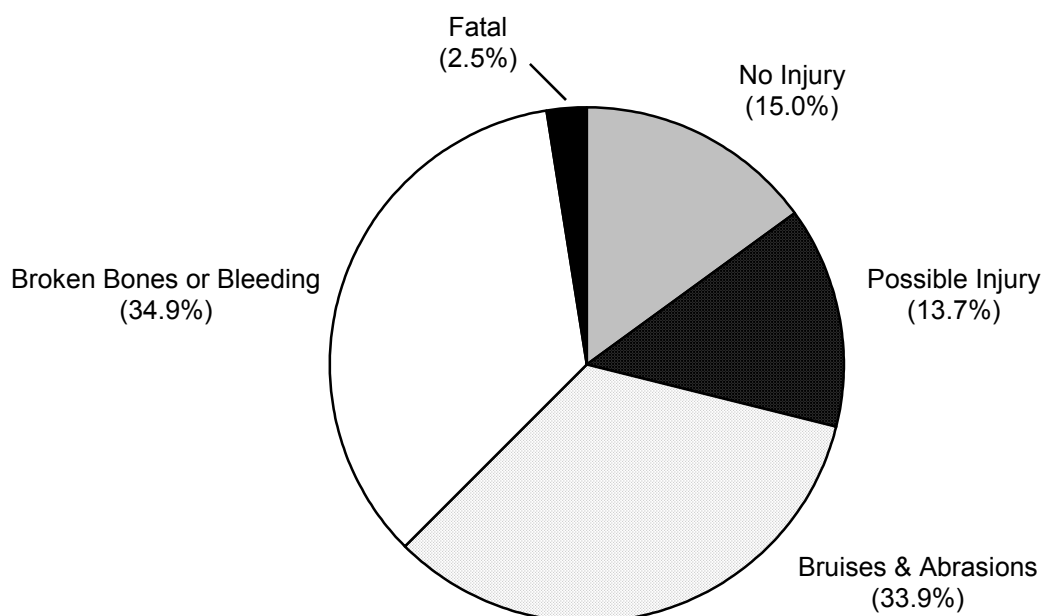
### Motorcycle Crashes by County (Utah 2003)

Motorcycle Crashes												
County	Property Damage Only (PDO)			Injury			Fatal			Total		
	Motorcycle	Rate	Rate	Motorcycle	Rate	Rate	Motorcycle	Rate	Rate	All	Rate	Rate
	PDO	per 100	per	Injury	per 100	per	Fatal	per 100	per	Motorcycle	per 100	per
	Crashes	Million	10,000	Crashes	Million	10,000	Crashes	Million	10,000	Crashes	Million	10,000
	#	VTM	Population	#	VTM	Population	#	VTM	Population	#	VTM	Population
Beaver	0	0.0	0.0	4	1.7	6.4	0	0.0	0.0	4	1.7	6.4
Box Elder	1	0.1	0.2	9	1.0	2.0	0	0.0	0.0	10	1.1	2.3
Cache	6	0.7	0.6	25	3.0	2.5	0	0.0	0.0	31	3.7	3.2
Carbon	1	0.3	0.5	5	1.7	2.6	0	0.0	0.0	6	2.0	3.1
Daggett	0	0.0	0.0	1	3.7	10.9	0	0.0	0.0	1	3.7	10.9
Davis	4	0.2	0.2	41	1.8	1.6	1	0.0	0.0	46	2.1	1.8
Duchesne	0	0.0	0.0	7	3.6	4.8	1	0.5	0.7	8	4.1	5.4
Emery	1	0.3	1.0	3	0.9	2.9	2	0.6	1.9	6	1.7	5.7
Garfield	1	0.8	2.2	9	7.2	19.9	0	0.0	0.0	10	8.0	22.1
Grand	1	0.4	1.2	7	2.5	8.3	0	0.0	0.0	8	2.9	9.5
Iron	3	0.5	0.8	13	2.1	3.6	1	0.2	0.3	17	2.7	4.7
Juab	2	0.5	2.3	2	0.5	2.3	0	0.0	0.0	4	1.1	4.6
Kane	1	0.8	1.7	5	4.1	8.4	1	0.8	1.7	7	5.7	11.8
Millard	2	0.5	1.6	2	0.5	1.6	0	0.0	0.0	4	1.0	3.3
Morgan	2	1.8	2.7	6	5.3	8.0	1	0.9	1.3	9	7.9	11.9
Piute	0	0.0	0.0	1	3.3	7.4	0	0.0	0.0	1	3.3	7.4
Rich	0	0.0	0.0	6	13.8	28.9	0	0.0	0.0	6	13.8	28.9
Salt Lake	39	0.5	0.4	242	3.0	2.6	5	0.1	0.1	286	3.6	3.0
San Juan	1	0.4	0.7	10	3.6	7.0	0	0.0	0.0	11	3.9	7.7
Sanpete	0	0.0	0.0	2	0.9	0.9	1	0.4	0.4	3	1.3	1.3
Sevier	0	0.0	0.0	4	1.0	2.1	0	0.0	0.0	4	1.0	2.1
Summit	0	0.0	0.0	10	1.5	2.9	1	0.2	0.3	11	1.7	3.2
Tooele	1	0.1	0.2	13	1.6	2.7	0	0.0	0.0	14	1.8	2.9
Uintah	0	0.0	0.0	10	3.5	3.8	0	0.0	0.0	10	3.5	3.8
Utah	6	0.2	0.1	118	3.5	2.9	1	0.0	0.0	125	3.7	3.0
Wasatch	0	0.0	0.0	4	1.6	2.3	3	1.2	1.7	7	2.7	4.0
Washington	5	0.5	0.5	32	3.2	3.0	1	0.1	0.1	38	3.8	3.6
Wayne	1	2.6	4.0	5	12.9	20.1	0	0.0	0.0	6	15.5	24.1
Weber	6	0.4	0.3	65	4.4	3.2	2	0.1	0.1	73	4.9	3.5
Statewide	84	0.4	0.4	661	2.8	2.8	21	0.1	0.1	766	3.2	3.2

- Two different rates are given in the above table; one based on vehicle miles traveled in the county, and another based on the population of the county.
- Rate per 100 million vehicle miles traveled:
  - Rich (13.8), Wayne (12.9) and Garfield (7.2) had the highest rates of motorcycle injury crashes per 100 million vehicle miles traveled.
  - Wasatch (1.2), Morgan (0.9) and Kane (0.8) had the highest rates of fatal motorcycle crashes per 100 million vehicle miles traveled.
- Rate per 10,000 population:
  - Rich (28.9), Wayne (20.1) and Garfield (19.9) had the highest rates of motorcycle injury crashes per 10,000 population.
  - Emery (1.9), Kane (1.7) and Wasatch (1.7) had the highest rates of fatal motorcycle crashes per 10,000 population.

## Motorcyclist Characteristics (Driver and Passenger)

### Injury Severity of Motorcyclists Involved in Crashes (Utah 2003)



- In the above graph, there were a total of 886 motorcyclists involved in crashes.
- The above graph shows that the percentage of injured motorcyclists (82.5%) was much higher than the percentage of occupants injured in all motor vehicle crashes (21.3%).
- A fatal injury was sustained by 2.5% of motorcyclists compared to 0.2% of all motor vehicle crash occupants. In fact, fatalities were 12 times higher for motorcyclists than for other motor vehicle crash occupants.

### Occupant Placement of Motorcyclists Involved in Crashes (Utah 2003)

Motorcyclists (Driver and Passenger)								
Occupant Placement	Non-Injured Motorcyclists		Injured Motorcyclists		Motorcyclists Killed		Total Motorcyclists	
	#	%	#	%	#	%	#	%
Driver	112	83.6%	644	88.2%	20	90.9%	776	87.6%
Passenger	22	16.4%	86	11.8%	2	9.1%	110	12.4%
<b>Total</b>	<b>134</b>	<b>100.0%</b>	<b>730</b>	<b>100.0%</b>	<b>22</b>	<b>100.0%</b>	<b>886</b>	<b>100.0%</b>

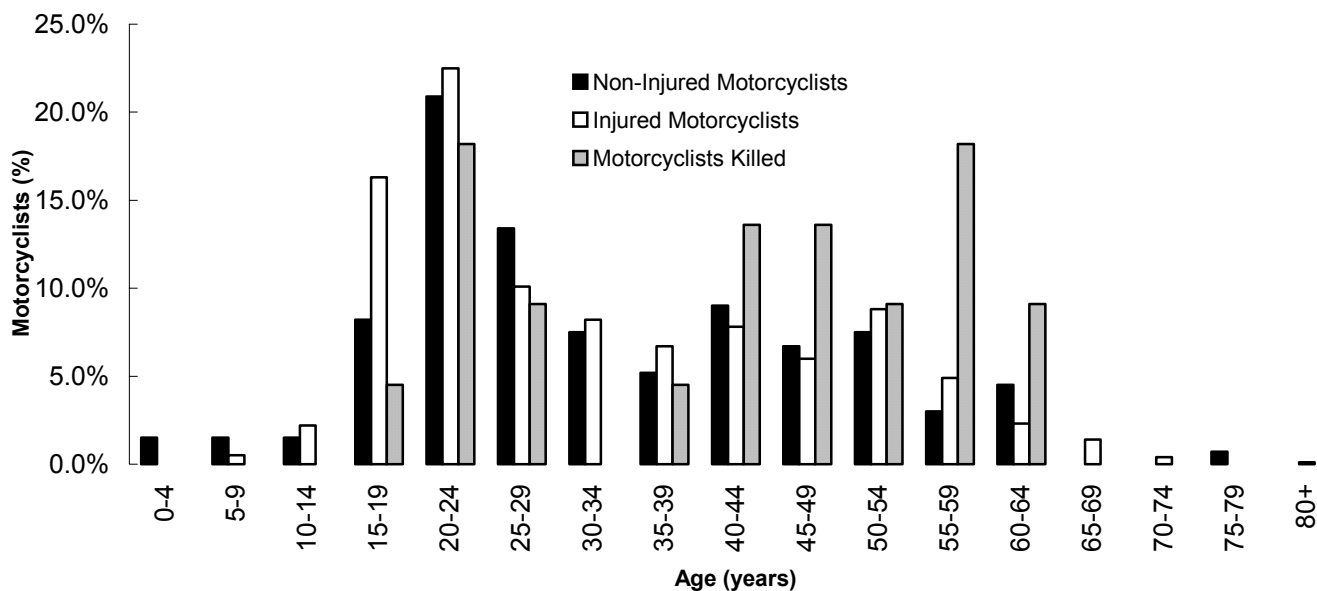
- The above table shows that drivers accounted for the majority of injured motorcyclists (88.2%) and 90.9% of the motorcyclist fatalities.
- In addition, there were 8 pedestrians and 1 bicyclist involved in motorcycle crashes. One pedestrian was killed in the crash, while the other pedestrians and bicyclist sustained non-fatal injuries.

## Motorcyclist Characteristics (Driver and Passenger)

### Age of Motorcyclists Involved in Crashes (Utah 2003)

Motorcyclists (Driver and Passenger)								
	Non-Injured Motorcyclists		Injured Motorcyclists		Motorcyclists Killed		Total Motorcyclists	
Age	#	%	#	%	#	%	#	%
0-4	2	1.5%	0	0.0%	0	0.0%	2	0.2%
5-9	2	1.5%	4	0.5%	0	0.0%	6	0.7%
10-14	2	1.5%	16	2.2%	0	0.0%	18	2.0%
15-19	11	8.2%	119	16.3%	1	4.5%	131	14.8%
20-24	28	20.9%	164	22.5%	4	18.2%	196	22.1%
25-29	18	13.4%	74	10.1%	2	9.1%	94	10.6%
30-34	10	7.5%	60	8.2%	0	0.0%	70	7.9%
35-39	7	5.2%	49	6.7%	1	4.5%	57	6.4%
40-44	12	9.0%	57	7.8%	3	13.6%	72	8.1%
45-49	9	6.7%	44	6.0%	3	13.6%	56	6.3%
50-54	10	7.5%	64	8.8%	2	9.1%	76	8.6%
55-59	4	3.0%	36	4.9%	4	18.2%	44	5.0%
60-64	6	4.5%	17	2.3%	2	9.1%	25	2.8%
65-69	0	0.0%	10	1.4%	0	0.0%	10	1.1%
70-74	0	0.0%	3	0.4%	0	0.0%	3	0.3%
75-79	1	0.7%	0	0.0%	0	0.0%	1	0.1%
80+	0	0.0%	1	0.1%	0	0.0%	1	0.1%
Missing	12	9.0%	12	1.6%	0	0.0%	24	2.7%
Total	134	100.0%	730	100.0%	22	100.0%	886	100.0%

### Age of Motorcyclists Involved in Crashes (Utah 2003)



- Overall, the largest percentage of motorcyclists involved in crashes were aged 20 to 24 years (22.1%). This age group also represented the largest percentage of injured motorcyclists involved in crashes (22.5%).
- The highest percentage of motorcyclist fatalities occurred in the 20 to 24 year age group (18.2%) and the 55 to 59 year age group (18.2%).

## Motorcyclist Characteristics (Driver and Passenger)

### Gender of Motorcyclists Involved in Crashes (Utah 2003)

Motorcyclists (Driver and Passenger)								
	Non-Injured Motorcyclists		Injured Motorcyclists		Motorcyclists Killed		Total Motorcyclists	
Gender	#	%	#	%	#	%	#	%
Female	31	23.1%	121	16.6%	4	18.2%	156	17.6%
Male	95	70.9%	605	82.9%	18	81.8%	718	81.0%
Missing	8	6.0%	4	0.5%	0	0.0%	12	1.4%
Total	134	100.0%	730	100.0%	22	100.0%	886	100.0%

- The majority of all motorcyclists (81.0%), injured motorcyclists (82.9%) and motorcyclists killed (81.8%) in crashes were male.

### Helmet Use of Motorcyclists Involved in Crashes (Utah 2003)

Motorcyclists (Driver and Passenger)								
	Non-Injured Motorcyclists		Injured Motorcyclists		Motorcyclists Killed		Total Motorcyclists	
Helmet Use	#	%	#	%	#	%	#	%
Helmet Worn	35	26.1%	270	37.0%	9	40.9%	314	35.4%
Helmet Not Worn / Unknown	99	73.9%	460	63.0%	13	59.1%	572	64.6%
Total	134	100.0%	730	100.0%	22	100.0%	886	100.0%

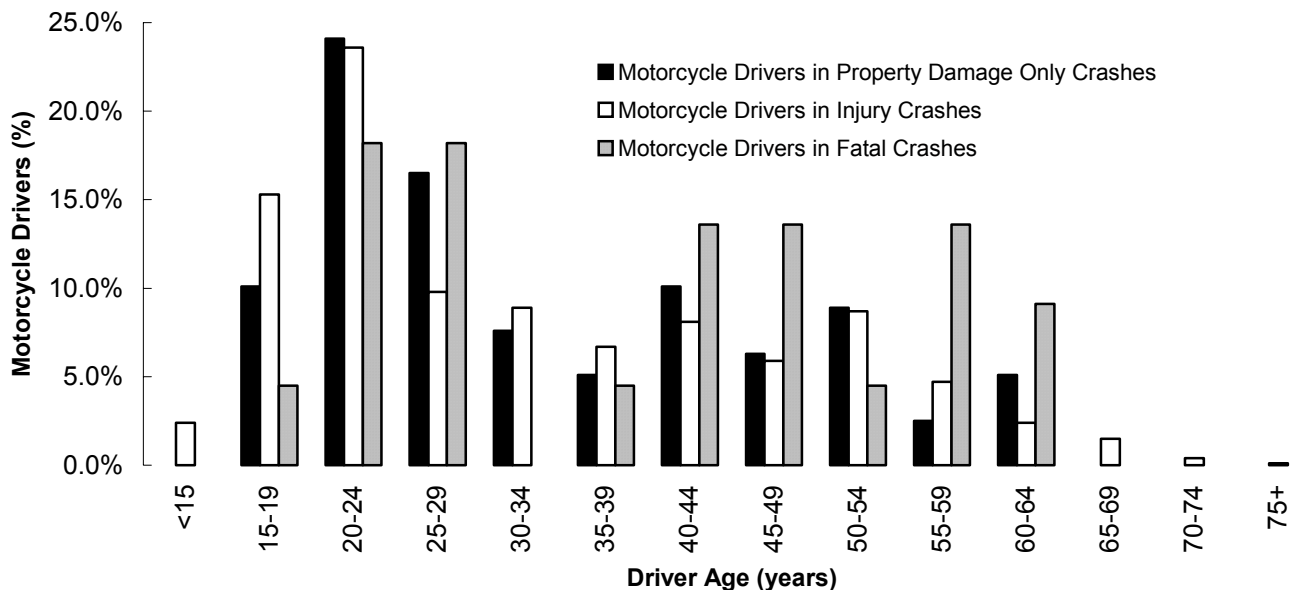
- Only 35.4% of motorcycle drivers and passengers involved in crashes wore a helmet.
- The percentage of helmet use was slightly higher for those motorcycle drivers and passengers injured in a crash (37.0%), as well as those killed in a crash (40.9%).
- Utah law states that anyone under the age of 18 years riding a motorcycle, either as the driver or as the passenger, must wear a helmet approved by the Department of Public Safety.

## Motorcycle Driver Characteristics

### Motorcycle Driver Age (Utah 2003)

Motorcycle Drivers								
	Motorcycle Drivers Involved in Property Damage Only Crashes		Motorcycle Drivers Involved in Injury Crashes		Motorcycle Drivers Involved in Fatal Crashes		Total Motorcycle Drivers Involved in Crashes	
Driver Age	#	%	#	%	#	%	#	%
<15	0	0.0%	16	2.4%	0	0.0%	16	2.1%
15-19	8	10.1%	103	15.3%	1	4.5%	112	14.4%
20-24	19	24.1%	159	23.6%	4	18.2%	182	23.5%
25-29	13	16.5%	66	9.8%	4	18.2%	83	10.7%
30-34	6	7.6%	60	8.9%	0	0.0%	66	8.5%
35-39	4	5.1%	45	6.7%	1	4.5%	50	6.4%
40-44	8	10.1%	55	8.1%	3	13.6%	66	8.5%
45-49	5	6.3%	40	5.9%	3	13.6%	48	6.2%
50-54	7	8.9%	59	8.7%	1	4.5%	67	8.6%
55-59	2	2.5%	32	4.7%	3	13.6%	37	4.8%
60-64	4	5.1%	16	2.4%	2	9.1%	22	2.8%
65-69	0	0.0%	10	1.5%	0	0.0%	10	1.3%
70-74	0	0.0%	3	0.4%	0	0.0%	3	0.4%
75+	0	0.0%	1	0.1%	0	0.0%	1	0.1%
Missing	3	3.8%	10	1.5%	0	0.0%	13	1.7%
Total	79	100.0%	675	100.0%	22	100.0%	776	100.0%

### Age of Motorcycle Drivers Involved in Crashes (Utah 2003)



- The above table and graph show that over one-half (50.7%) of the motorcycle drivers involved in crashes were under the age of 30 years.
- The percentage of drivers involved in injury crashes was highest for those aged 20 to 24 years (23.6%).
- The percentage of drivers involved in fatal crashes was highest for those aged 20 to 24 years (18.2%) and 25 to 29 years (18.2%).

## Motorcycle Driver Characteristics

### Motorcycle Driver Gender (Utah 2003)

Motorcycle Drivers								
	Motorcycle Drivers Involved in Property Damage Only Crashes		Motorcycle Drivers Involved in Injury Crashes		Motorcycle Drivers Involved in Fatal Crashes		Total Motorcycle Drivers Involved in Crashes	
Driver Gender	#	%	#	%	#	%	#	%
Female	11	13.9%	56	8.3%	2	9.1%	69	8.9%
Male	65	82.3%	611	90.5%	20	90.9%	696	89.7%
Missing	3	3.8%	8	1.2%	0	0.0%	11	1.4%
<b>Total</b>	<b>79</b>	<b>100.0%</b>	<b>675</b>	<b>100.0%</b>	<b>22</b>	<b>100.0%</b>	<b>776</b>	<b>100.0%</b>

- The majority of motorcycle drivers involved in total crashes (89.7%), injury crashes (90.5%) and fatal crashes (90.9%) were male. This does not necessarily indicate that male motorcycle drivers are at greater risk for a crash, but may reflect a higher proportion of male motorcycle drivers in Utah.

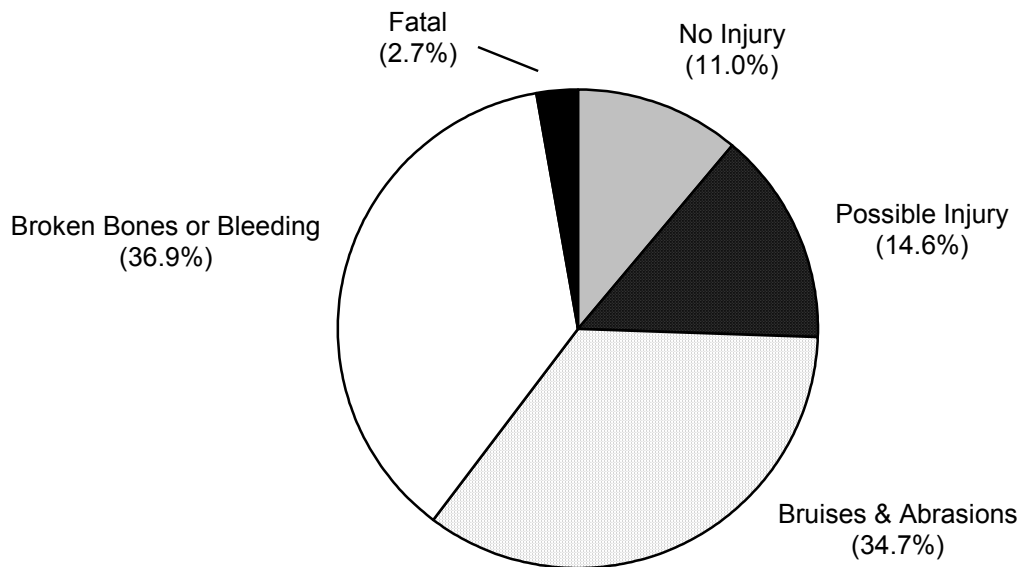
### Alcohol and Other Drug Involvement of Motorcycle Drivers (Utah 2003)



- Of the 22 motorcycle drivers and motorcycle passengers killed in 2003, 1 motorcycle driver was impaired by alcohol or other drugs.

## Motorcycle Crash Characteristics

### Motorcycle Crash Severity (Utah 2003)



- In the above graph, there were a total of 766 motorcycle crashes.
- Most motorcycle crashes resulted in an injury (86.2%) compared to 36.3% of all motor vehicle crashes.
- The percentage of fatal motorcycle crashes was 2.7%, compared to 0.5% of all motor vehicle crashes. In fact, motorcycle crashes were 7 times more likely to be fatal than other motor vehicle crashes.

### Motorcycle Crashes by Month of Year (Utah 2003)

Motorcycle Crashes									
		Property Damage Only (PDO)		Injury		Fatal		Total	
	Days in	Motorcycle	Rate	Motorcycle	Rate	Motorcycle	Rate	All Motorcycle	Rate
	Month	PDO Crashes	per	Injury Crashes	per	Fatal Crashes	per	Crashes	per
Month	#	#	Day	#	Day	#	Day	#	Day
January	31	5	0.2	22	0.7	0	0.0	27	0.9
February	28	4	0.1	7	0.3	0	0.0	11	0.4
March	31	1	0.0	24	0.8	3	0.1	28	0.9
April	30	7	0.2	40	1.3	0	0.0	47	1.6
May	31	11	0.4	74	2.4	1	0.0	86	2.8
June	30	7	0.2	94	3.1	5	0.2	106	3.5
July	31	10	0.3	104	3.4	1	0.0	115	3.7
August	31	11	0.4	102	3.3	6	0.2	119	3.8
September	30	17	0.6	107	3.6	3	0.1	127	4.2
October	31	7	0.2	71	2.3	1	0.0	79	2.5
November	30	3	0.1	12	0.4	0	0.0	15	0.5
December	31	1	0.0	4	0.1	1	0.0	6	0.2
Total	365	84	0.2	661	1.8	21	0.1	766	2.1

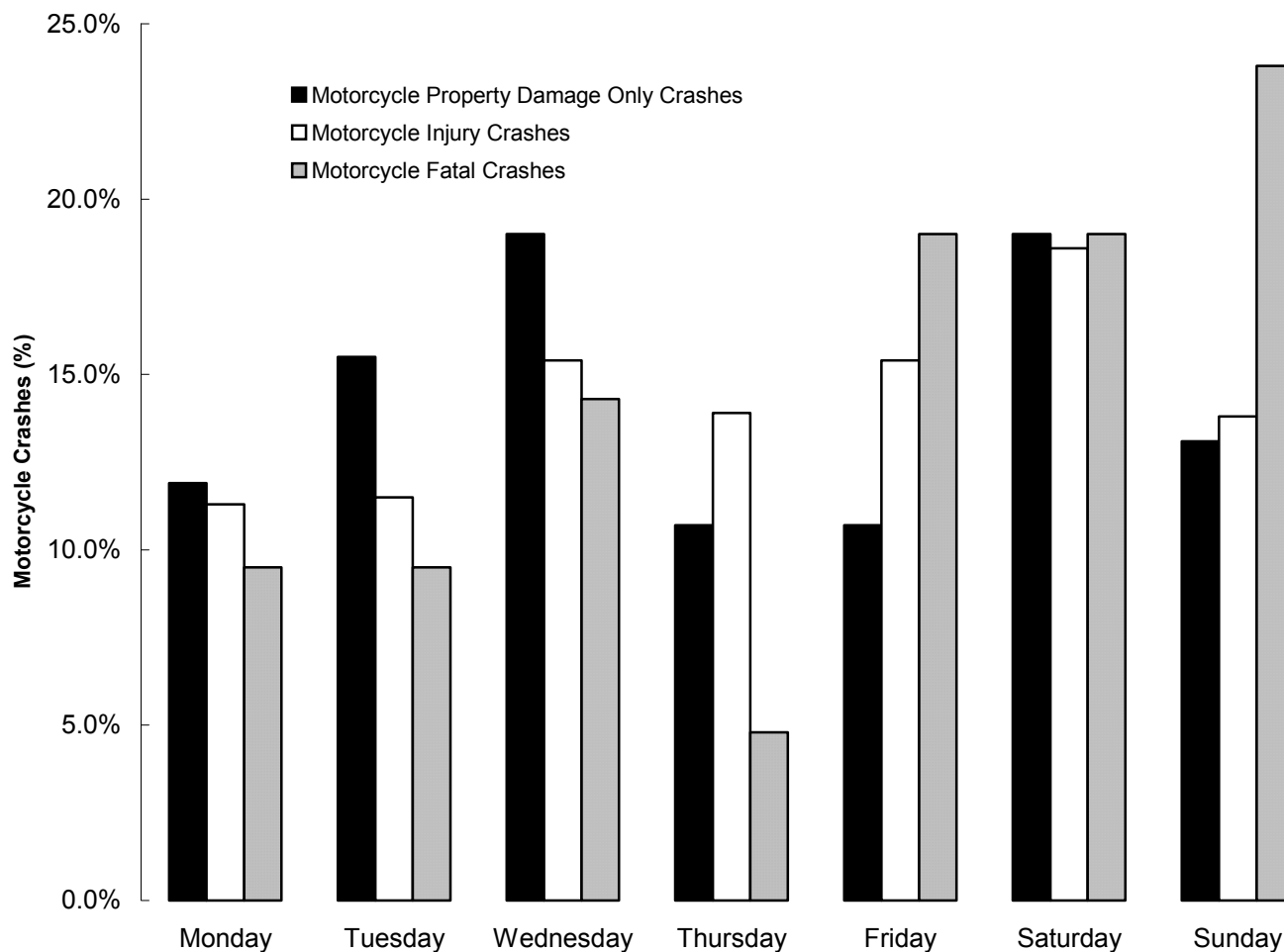
- The above table shows May through October had the highest rate per day of total motorcycle crashes and injury crashes. Very few motorcycle crashes occurred in the winter months, which may be due to the decrease of individuals riding motorcycles in the winter.

## Motorcycle Crash Characteristics

### Motorcycle Crashes by Day of Week (Utah 2003)

Motorcycle Crashes								
Day of Week	Property Damage Only Crashes		Injury Crashes		Fatal Crashes		Total Crashes	
	#	%	#	%	#	%	#	%
Monday	10	11.9%	75	11.3%	2	9.5%	87	11.4%
Tuesday	13	15.5%	76	11.5%	2	9.5%	91	11.9%
Wednesday	16	19.0%	102	15.4%	3	14.3%	121	15.8%
Thursday	9	10.7%	92	13.9%	1	4.8%	102	13.3%
Friday	9	10.7%	102	15.4%	4	19.0%	115	15.0%
Saturday	16	19.0%	123	18.6%	4	19.0%	143	18.7%
Sunday	11	13.1%	91	13.8%	5	23.8%	107	14.0%
Total	84	100.0%	661	100.0%	21	100.0%	766	100.0%

### Motorcycle Crashes by Day of Week (Utah 2003)



- The above table and graph show that the highest percentage of total motorcycle crashes (18.7%) and motorcycle injury crashes (18.6%) occurred on Saturday.
- Fatal motorcycle crashes occurred most frequently on Sunday (23.8%).

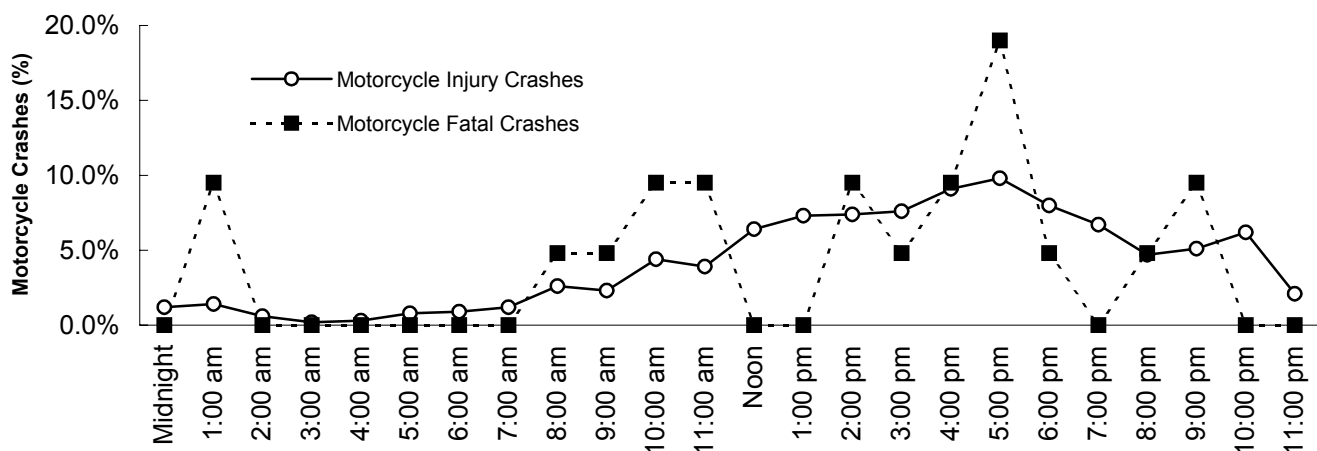


## Motorcycle Crash Characteristics

### Motorcycle Crashes by Hour of Day (Utah 2003)

Motorcycle Crashes								
Hour	Property Damage Only Crashes		Injury Crashes		Fatal Crashes		Total Crashes	
	#	%	#	%	#	%	#	%
Midnight	1	1.2%	8	1.2%	0	0.0%	9	1.2%
1:00 am	3	3.6%	9	1.4%	2	9.5%	14	1.8%
2:00 am	0	0.0%	4	0.6%	0	0.0%	4	0.5%
3:00 am	0	0.0%	1	0.2%	0	0.0%	1	0.1%
4:00 am	1	1.2%	2	0.3%	0	0.0%	3	0.4%
5:00 am	0	0.0%	5	0.8%	0	0.0%	5	0.7%
6:00 am	1	1.2%	6	0.9%	0	0.0%	7	0.9%
7:00 am	2	2.4%	8	1.2%	0	0.0%	10	1.3%
8:00 am	4	4.8%	17	2.6%	1	4.8%	22	2.9%
9:00 am	6	7.1%	15	2.3%	1	4.8%	22	2.9%
10:00 am	1	1.2%	29	4.4%	2	9.5%	32	4.2%
11:00 am	6	7.1%	26	3.9%	2	9.5%	34	4.4%
Noon	4	4.8%	42	6.4%	0	0.0%	46	6.0%
1:00 pm	5	6.0%	48	7.3%	0	0.0%	53	6.9%
2:00 pm	11	13.1%	49	7.4%	2	9.5%	62	8.1%
3:00 pm	4	4.8%	50	7.6%	1	4.8%	55	7.2%
4:00 pm	5	6.0%	60	9.1%	2	9.5%	67	8.7%
5:00 pm	6	7.1%	65	9.8%	4	19.0%	75	9.8%
6:00 pm	8	9.5%	53	8.0%	1	4.8%	62	8.1%
7:00 pm	3	3.6%	44	6.7%	0	0.0%	47	6.1%
8:00 pm	6	7.1%	31	4.7%	1	4.8%	38	5.0%
9:00 pm	4	4.8%	34	5.1%	2	9.5%	40	5.2%
10:00 pm	2	2.4%	41	6.2%	0	0.0%	43	5.6%
11:00 pm	1	1.2%	14	2.1%	0	0.0%	15	2.0%
Total	84	100.0%	661	100.0%	21	100.0%	766	100.0%

### Motorcycle Crashes by Hour of Day (Utah 2003)



- In 2003, total motorcycle crashes and injury motorcycle crashes followed a similar time pattern, peaking between 2:00 pm and 6:00 pm.
- The highest proportion of fatal motorcycle crashes occurred during the 5:00 pm hour.

## Motorcycle Crash Characteristics

### Types of Crashes Involving Motorcycles (Utah 2003)

Motorcycle Crashes								
Crash Type	Property Damage Only Crashes		Injury Crashes		Fatal Crashes		Total Crashes	
	#	%	#	%	#	%	#	%
Two Motor Vehicles	63	75.0%	305	46.1%	13	61.9%	381	49.7%
Ran Off Roadway - To the Right	8	9.5%	79	12.0%	4	19.0%	91	11.9%
Overtaken in Roadway	3	3.6%	87	13.2%	1	4.8%	91	11.9%
Other Non-Collision	1	1.2%	63	9.5%	0	0.0%	64	8.4%
Motor Vehicle and Fixed Object	2	2.4%	45	6.8%	1	4.8%	48	6.3%
Ran Off Roadway - To the Left	3	3.6%	43	6.5%	1	4.8%	47	6.1%
Motor Vehicle and Other Object	1	1.2%	16	2.4%	0	0.0%	17	2.2%
Motor Vehicle and Wild Animal	1	1.2%	10	1.5%	0	0.0%	11	1.4%
Motor Vehicle and Pedestrian	0	0.0%	6	0.9%	1	4.8%	7	0.9%
Motor Vehicle and Domestic Animal	2	2.4%	4	0.6%	0	0.0%	6	0.8%
Ran Off Roadway - Through Median	0	0.0%	1	0.2%	0	0.0%	1	0.1%
Motor Vehicle and Train	0	0.0%	1	0.2%	0	0.0%	1	0.1%
Motor Vehicle and Skates, Scooters, Skateboards	0	0.0%	1	0.2%	0	0.0%	1	0.1%
Motor Vehicle and Bicycle	0	0.0%	0	0.0%	0	0.0%	0	0.0%
<b>Total</b>	<b>84</b>	<b>100.0%</b>	<b>661</b>	<b>100.0%</b>	<b>21</b>	<b>100.0%</b>	<b>766</b>	<b>100.0%</b>

- The majority of motorcycle property damage only crashes (75.0%), injury crashes (46.1%) and fatal crashes (61.8%) involved another motor vehicle.
- "Ran off the roadway" (to the right, to the left, or through the median) accounted for another 23.8% of the fatal motorcycle crashes.

### Collision Description of Motorcycle Crashes (Utah 2003)

Motorcycle Crashes								
Collision Description	Property Damage Only Crashes		Injury Crashes		Fatal Crashes		Total Crashes	
	#	%	#	%	#	%	#	%
Single Vehicle Rollover	12	14.3%	210	31.8%	8	38.1%	230	30.0%
Other	30	35.7%	181	27.4%	0	0.0%	211	27.5%
Broadside	14	16.7%	136	20.6%	5	23.8%	155	20.2%
Rear End	22	26.2%	89	13.5%	0	0.0%	111	14.5%
Side Swipe	4	4.8%	26	3.9%	0	0.0%	30	3.9%
Head-On	1	1.2%	10	1.5%	7	33.3%	18	2.3%
Bicyclist/Pedestrian Crash	0	0.0%	6	0.9%	1	4.8%	7	0.9%
Single Vehicle Fixed Object	1	1.2%	3	0.5%	0	0.0%	4	0.5%
<b>Total</b>	<b>84</b>	<b>50.0%</b>	<b>661</b>	<b>40.8%</b>	<b>21</b>	<b>61.9%</b>	<b>766</b>	<b>42.4%</b>

- Overall, the leading collision types for motorcycle crashes (excluding other) were single vehicle rollovers (30.0%) and broadside collisions (20.2%).
- The leading collision types for motorcycle injury crashes (excluding other) were also single vehicle rollovers (31.8%) and broadside collisions (20.6%).
- Single vehicle rollovers (38.1%) and head-on collisions (33.3%) accounted for the majority of fatal motorcycle crashes.

## Motorcycle Crash Characteristics

### Urban/Rural Location of Motorcycle Crashes (Utah 2003)

Motorcycle Crashes								
	Property Damage Only Crashes		Injury Crashes		Fatal Crashes		Total Crashes	
Urban/Rural Location	#	%	#	%	#	%	#	%
Rural Area - Up to 5,000	24	28.6%	234	35.4%	16	76.2%	274	35.8%
Small Urban - 5,000 to 49,999	6	7.1%	41	6.2%	0	0.0%	47	6.1%
Moderate Urban - 50,000 to 199,999	5	6.0%	14	2.1%	0	0.0%	19	2.5%
Large Urban - 200,000 or More	49	58.3%	371	56.1%	5	23.8%	425	55.5%
Missing	0	0.0%	1	0.2%	0	0.0%	1	0.1%
<b>Total</b>	<b>84</b>	<b>100.0%</b>	<b>661</b>	<b>100.0%</b>	<b>21</b>	<b>100.0%</b>	<b>766</b>	<b>100.0%</b>

- While the majority of total motorcycle crashes (64.1%) as well as the majority of motorcycle injury crashes (64.4%) occurred in small, moderate and large urban areas, the majority of fatal motorcycle crashes occurred in rural areas (76.2%).
- In fact, motorcycle crashes occurring in rural areas were 13 times more likely to result in a fatality than motorcycle crashes in urban areas.

### Motorcycle Crash Violations (Utah 2003)

Violations (Motorcycle Drivers)								
	Motorcycle Drivers Cited in PDO Crashes		Motorcycle Drivers Cited in Injury Crashes		Motorcycle Drivers Cited in Fatal Crashes		Total Motorcycle Drivers Cited	
Violations	#	%	#	%	#	%	#	%
Other Non-Moving Violations	5	31.3%	37	20.4%	0	0.0%	42	21.3%
Speeding	1	6.3%	24	13.3%	0	0.0%	25	12.7%
All Other Moving Violations	0	0.0%	25	13.8%	0	0.0%	25	12.7%
Driving Under the Influence	1	6.3%	18	9.9%	0	0.0%	19	9.6%
Following Too Close	2	12.5%	13	7.2%	0	0.0%	15	7.6%
Reckless Driving	0	0.0%	14	7.7%	0	0.0%	14	7.1%
Improper Lookout	1	6.3%	10	5.5%	0	0.0%	11	5.6%
Failure to Yield Right-of-Way	1	6.3%	8	4.4%	0	0.0%	9	4.6%
Negligent Collision	2	12.5%	6	3.3%	0	0.0%	8	4.1%
Hit and Run	0	0.0%	6	3.3%	0	0.0%	6	3.0%
Improper Lane Change	1	6.3%	4	2.2%	0	0.0%	5	2.5%
Improper Passing	0	0.0%	5	2.8%	0	0.0%	5	2.5%
Failure to Stop at Red Light	1	6.3%	3	1.7%	0	0.0%	4	2.0%
Improper Turn (Failure to Signal)	1	6.3%	2	1.1%	0	0.0%	3	1.5%
Failure to Stop at Stop Sign	0	0.0%	3	1.7%	0	0.0%	3	1.5%
Wrong Side of Road	0	0.0%	2	1.1%	0	0.0%	2	1.0%
Improper Start or Stop	0	0.0%	1	0.6%	0	0.0%	1	0.5%
Improper Backing	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Wrong Way on One-Way Street	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Vehicle Homicide	0	0.0%	0	0.0%	0	0.0%	0	0.0%
<b>Total</b>	<b>16</b>	<b>100.0%</b>	<b>181</b>	<b>100.0%</b>	<b>0</b>	<b>0.0%</b>	<b>197</b>	<b>100.0%</b>

- In 2003, there were 776 motorcycle drivers involved in crashes. Officers at the scene of the crash cited 197 (25.3%) of those drivers for a traffic violation.
- Overall, motorcycle drivers involved in crashes were cited most often for "other non-moving violations" (21.3%), and "speeding" (12.7%).

## Motorcycle Crash Characteristics

### Contributing Factors of Motorcycle Crashes (Utah 2003)

Contributing Factors (Motorcycle Crashes)								
	Motorcycle Property Damage Only Crashes		Motorcycle Injury Crashes		Motorcycle Fatal Crashes		Total Motorcycle Crashes	
Contributing Factors	#	%	#	%	#	%	#	%
Speed Too Fast	9	18.8%	152	23.8%	9	45.0%	170	24.1%
Other Improper Driving	10	20.8%	127	19.9%	4	20.0%	141	20.0%
Improper Lookout	8	16.7%	84	13.2%	1	5.0%	93	13.2%
Followed Too Closely	9	18.8%	47	7.4%	0	0.0%	56	7.9%
Failed to Yield Right of Way	0	0.0%	31	4.9%	0	0.0%	31	4.4%
Drove Left of Center	1	2.1%	26	4.1%	3	15.0%	30	4.2%
Non-Contact Vehicle Involved	0	0.0%	20	3.1%	0	0.0%	20	2.8%
Made Improper Turn	4	8.3%	15	2.4%	0	0.0%	19	2.7%
Driving Under the Influence	1	2.1%	18	2.8%	0	0.0%	19	2.7%
Improper Overtaking	1	2.1%	18	2.8%	0	0.0%	19	2.7%
Object in Roadway	1	2.1%	17	2.7%	0	0.0%	18	2.5%
Aggressive Driving	0	0.0%	13	2.0%	0	0.0%	13	1.8%
Wrong Side of Road	0	0.0%	10	1.6%	1	5.0%	11	1.6%
Tires Defective	0	0.0%	10	1.6%	0	0.0%	10	1.4%
Disregard Traffic Signal	1	2.1%	8	1.3%	0	0.0%	9	1.3%
Other Driver Distractions	1	2.1%	8	1.3%	0	0.0%	9	1.3%
Hit and Run	0	0.0%	8	1.3%	0	0.0%	8	1.1%
Had Been Drinking	0	0.0%	7	1.1%	0	0.0%	7	1.0%
Passed Stop Sign	0	0.0%	3	0.5%	1	5.0%	4	0.6%
Other Defective Condition of Vehicle	0	0.0%	4	0.6%	0	0.0%	4	0.6%
Brakes Defective	0	0.0%	3	0.5%	0	0.0%	3	0.4%
Fatigued	1	2.1%	1	0.2%	0	0.0%	2	0.3%
Sick or Ill	0	0.0%	2	0.3%	0	0.0%	2	0.3%
Under the Influence of Drugs	0	0.0%	2	0.3%	0	0.0%	2	0.3%
Headlights Insufficient or Out	0	0.0%	2	0.3%	0	0.0%	2	0.3%
Driver Using Cell Phone	0	0.0%	1	0.2%	0	0.0%	1	0.1%
Vehicle Rolling in Traffic Lane	0	0.0%	0	0.0%	1	5.0%	1	0.1%
Stolen	1	2.1%	0	0.0%	0	0.0%	1	0.1%
Headlights Glaring	0	0.0%	1	0.2%	0	0.0%	1	0.1%
<b>Total</b>	<b>48</b>	<b>100.0%</b>	<b>638</b>	<b>100.0%</b>	<b>20</b>	<b>100.0%</b>	<b>706</b>	<b>100.0%</b>

- Contributing factors were coded by the police officer at the scene of the crash for each vehicle involved in the crash. The officer may record no contributing factor or up to two different contributing factors.
- “Speed too fast” was the leading contributing factor for total motorcycle crashes (24.1%), motorcycle injury crashes (23.8%) and fatal motorcycle crashes (45.0%).
- The combined contributing factors of “driving under the influence,” “had been drinking” and “under the influence of drugs” accounted for 4.0% of total motorcycle crashes and 4.2% of motorcycle injury crashes.